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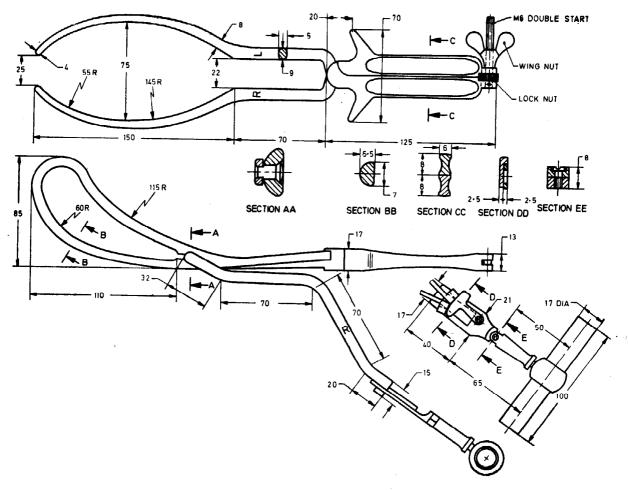


Indian Standard



SPECIFICATION FOR FORCEPS, MIDWIFERY, MODIFIED KEDARNATH DAS'S PATTERN, WITH AXIS TRACTION

- 1. Scope Dimensional and other requirements for modified Kedarnath Das's pattern midwifery forceps with axis traction used in obstetrics.
- 2. Shape and Dimensions As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 FORCEPS, MIDWIFERY, KEDARNATH DAS'S PATTERN, WITH AXIS TRACTION

- 2.1 The weight of the forceps including axis traction shall be 700 g.
- 2.2 A deviation of ± 2.5 percent shall be allowed on all dimensions.
- 3. Material Stainless steel of Designation 20Cr13 or 30Cr13 of IS: 6603-1972 'Specification for stainless steel bars and flats'.
- 3.1 The screw and wing nut shall be of the same material as used for forceps.

Adopted 21 February 1977

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IS: 8342 - 1977

4. Workmanship and Finish

- 4.1 The forceps shall be free from scales, burrs, pits and other surface defects.
- 4.2 All edges shall be smoothly rounded off.
- 4.3 The blades shall lock and unlock easily at the joint.
- 4.4 The wing nut [conforming to IS: 2636-1972 Specification for wing nuts (first revision)] shall fit well and run easily on the clamping screw.
- 4.5 The screw shall swivel freely on the pin fixing it to the lug. With the clamping screw engaged and the nut fully tightened the blades shall be securely fixed to each other.
- 4.6 The lug shall rotate freely in its socket.
- 4.7 The axis traction shall have a good fit to the correlative parts of the blades. Its components shall move freely and easily at the hinge joint.
- 4.8 The handle of the axis traction shall be securely fixed but rotate freely.
- 4.9 The forceps shall be polished bright and passivated.
- 5. Heat Treatment The forceps shall be hardened and tempered to give a hardness of 400 to 460 HV.

6. Tests

- 6.1 Lock the blades, engage the clamping screw and tighten the wing nut fully. Grip the curved parts of the blades between both hands and make the tips of the blades to touch each other and then open 10 times. On completion of the test, the blades shall not have taken a new permanent set.
- 6.2 With the blades locked and clamped as above, grip the curved part of the blades in each hand. Pull the blades away from one another using a moderate degree of force. On release of the force the blades shall not have taken a new permanent set.
- 6.3 Clamp the shank of one blade, near its junction with the curved part in the horizontal plane, the concave surface facing upwards. Suspend a load of 5 kg from the blades at a distance of 60 mm from the tip. Attain the load gradually and allow it to act for two minutes. On completion of the test the blades shall not have taken a new permanent set. Repeat this test on the other blade.
- **6.4** Clamp the handle of the axis traction so that rest of the axis traction hangs downward. Suspend a load of 10 kg from the study of axis traction. Attain the maximum load gradually. On completion of the test the axis traction shall show no sign of damage.
- **6.5** Corrosion Resistance The forceps shall satisfy the boiling and autoclaving test as specified in IS: 7531-1975 'Method for boiling and autoclaving, test for corrosion resistance of stainless steel surgical instruments'.
- 7. Marking Each forceps and axis traction handle shall be marked with the following:
 - a) Manufacturer's name, initials or recognized trade-mark; and
 - b) The words 'Stainless Steel'.

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- 7.1 ISI Certification Marking Details available with the Indian Standards Institution.
- 8. Packing The forceps with axis traction shall be wrapped in moisture-proof paper or packed in polyethylene bag. The forceps shall then be packed in cartons avoiding contact with one another. The forceps may also be packed as agreed to between the purchaser and the supplier.

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